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REVIEW OF RESEARCH--SOCIAL AND PHILOSOPHICAL FOUNDATIONS.

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SELECTED STUDIES IN PHILOSOPHY OF EDUCATION RELEVANT FOR EMPIRICAL RESEARCHERS AND FOCUSING ON CONCEPTS OF TEACHING AND LEARNING ARE REVIEWED. THESE INCLUDE (1) BEST ON DESCRIPTIVE AND PRESCRIPTIVE ACCOUNTS OF BEHAVIORS, (2) SCHEFFLER ON THE "RESTRICTIONS OF MANNER" WHICH ARE PART OF THE CONCEPT OF TEACHING, (3) ADAMS ON SCHEFFLER'S VIEWS, (4) GREEN ON TEACHING AS A VAGUE MEMBER OF THE "FAMILY" OF LEARNING ACTIVITIES, (5) HAY ON THE INADEQUACIES IN GREEN'S ANALYSIS, (6) GREEN ON THE AMBIGUITY OF TEACHING, (7) GREEN ON TEACHING GOALS, (8) MCCLELLAN ON GREEN'S DISTINCTIONS, (9) NEWSOME IN DISAGREEMENT WITH GREEN AND MCCLELLAN, (10) MCCLELLAN'S REJECTION OF NEWSOME'S CRITICISM, (11) BLACK ON THE EDUCATIONAL SIGNIFICANCE OF THE NOTION OF RULE-GOVERNED ACTION, (12) KOMISAR ON 4 DISTRICT MEANINGS OF "LEARNING," (13) HAMLYN ON A DELIMITING OF ROLES TO BE PERFORMED BY PHILOSOPHY AND PSYCHOLOGY IN LEARNING STUDIES, (14) KELLEY ON THE CONCEPT OF TRANSFER OF LEARNING, (15) HIRST ON THE NATURE OF A SUBJECT AREA AS RELATED TO LEARNINGS SOUGHT, (16) DEARDEN ON THE "DISCOVERY METHOD." MENTION IS MADE OF IMPORTANT PAPERS ON THE CONCEPT OF INDOCTRINATION. (AF)

REVIEW OF RESEARCH

SOCIAL AND PHILOSOPHICAL FOUNDATIONS

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In agreeing to review research in the social and philosophical founda tions of education one places himself well on the foolhardy side of that fine line which is said to separate courage from foolhardiness. This is so for a number of reasons. A number of fields fall under the "social philosophical" rubric and hence few people, and certainly not the present reviewer, can claim competence in all areas. Further, if a reviewer claims that some of the fields are more relevant or important than others, his colleagues are likely to charge that his disciplinary perspective has prevented him from seeing things as they are. Still another problem is presented by the very notion of a research review. Much of the scholarship in social-philosophical foundations is not empirical re search, and yet the whole notion of a review of research fits best those em pirical studies where each new piece of research adds to the accumulation of research evidence on a given topic. This is not clearly the case with some historical research, much philosophic research or with normative arguments concerning questions of educational policies or educational goals.

Fortunately, the task of reviewing research in social and philosophical foundations has already been done. The triennial review entitled "Philosophical and Social Framework of Education" appeared in the February 1967 REVIEW OF EDU CATIONAL RESEARCH (Vol. XXXVII, No. 1). The topics reviewed were:

1. Philosophy of education
2. History of education
3. Social policy and education
4. Professional organizations and education
5. International and comparative education
6. Sociology of education
7. Anthropology and education
8. Economics and education

Time does not permit a review of all of these fields, even if the review were to be limited to publications since the above review appeared. Although there may not be a "knowledge explosion" in all of the fields, there has certainly been a publication explosion.

With all of the disclaimers out of the way, what is proposed here is a review of selected studies in the field of philosophy of education which seem to have considerable relevance for empirical researchers. Wheeler (24), in his philosophy of education review mentioned above, included as two sub topics "linguistic analysis" and "philosophical psychology". These will be combined here since the first seems to deal largely with method (linguistic and conceptual analysis) and the second with an area of content (psychological concepts). Or to put this another way, the concern in the present review is with what has come to be called "analytic philosophy" as that philosophical approach has been used to study central concepts in education. This review will focus specifically on the concepts 'teaching' and 'learning'.

There seems to be a recurring theme in the work done on these concepts in recent years. This theme, often not explicitly stated, is that educators have mistakenly assumed that as empirical psychology develops it will increasingly tell them how the task of schooling the young should proceed. One factor contributing to this mistake has been examined by Edward Best (3) in an article entitled "The Suppressed Premise in Educational Psychology". Best argued that accounts of human behavior which purport to be descriptive often contain prescriptive language. He showed that some educational psychologists have drawn, or suggested, conclusions which are warranted if and only if a suppressed premise regarding the aims of schooling is assumed. Best claimed that even when psychologists have carefully refrained from prescribing, they have continued to use terms which are "mixed", i.e., terms which, in ordinary language, have both descriptive and prescriptive content. Such terms, used descriptively

by psychologists, are often read as prescriptions by educators. Unless the suppressed premise, whether suppressed by the psychologist or by the educator, is made explicit, misunderstanding abounds. For example, if a dispute arises, it is sometimes difficult to determine whether the disagreement is about psychology or about the aims of schooling.

The same basic point has been made in a somewhat different way by several philosophers who have attempted to analyze the concept of teaching. 'Teaching' is, in part at least, a normative concept, and hence not all ways of bringing about learning fall within the concept of teaching. Thus it has been argued that a theory of teaching cannot be derived logically from a purely descriptive theory of learning or enculturation. Scheffler's (21, 22) arguments in this regard are perhaps best known. There are, according to Scheffler, "restrictions of manner" which are a part of the concept of teaching. It is these restrictions which differentiate teaching from other ways of bringing about learning, e.g., indoctrinating, conditioning, propagandizing. Scheffler (23) has also argued that this characterization of teaching leaves important normative, epistemological and empirical questions to be answered. Answers are suggested, he has said, by three influential models of teaching. These he described as (a) the insight model, (b) the impression model, and (c) the rule model. Each model, according to Scheffler, holds some useful insights for those who seek to understand teaching.

Scheffler's characterization of 'teaching' has been challenged by Adams (1). Adams has charged that Scheffler's conclusions about the concept of teaching are not descriptive of ordinary usage but are rather prescriptions, i.e., what Scheffler treats as an ordinary, standard view of teaching is in fact a particular ethical proposal.

Green (8) has agreed with Scheffler that the concept of teaching is marked by restrictions in manner. Green asserted, however, that 'teaching' is vague,

and hence in the "family" of activities which are intended to bring about learning--teaching, instruction, indoctrination, etc.---precise lines cannot be drawn to show where an activity ceases to exemplify one concept and begins to exemplify another. Hay (13) argued that Green's analysis, though a significant contribution, was inadequate for several reasons. One charge made by Hay was that Green's work reflected certain ideals which were not made explicit. Green (9) denied this, saying that an analysis of the concept of teaching might yield certain ideals but that the concept is not derived from those ideals.

In another study Green (10) has argued that 'teaching' is ambiguous as well as vague. He distinguished among (a) institutional activities of teaching, (b) logical activities of teaching, and (c) strategic activities of teaching. Institutional activities, he held, are not necessary to teaching. Logical activities and strategic activities are both necessary to 'teaching' but the two cannot be evaluated in the same way. Logical activities of teaching are evaluated using logical criteria. Strategic activities are evaluated on the basis of consequences.

Green (7) has also argued that in addition to the restrictions of manner, the goal of teaching is different than the goals of some other ways of bringing about learning, i.e., teaching is concerned with a particular kind of learning. He distinguished between "behavior" and "action". The first, according to Green, is "rule-conforming" action and the second is "rule-obeying" action. McClellan (17) found this distinction somewhat misleading, and argued that the two are continuous rather than dichotomous if the concern is to describe human behavior. Newsome(20) found both Green's and McClellan's views to be faulty, and argued that the term "rule-governed behavior" led to a confusion of prescriptive and descriptive laws. McClellan (18) rejected Newsome's criticism as misguided and pointed out that the usage "rule-governed" is not prescriptive but is descriptive in quite an ordinary sense.

The concept of rule-governed behavior or principle-governed behavior is by no means clear, even though it is common to find such behavior listed as a goal of schooling. Max Black (4) addressed himself to the question of the educational significance of the notion of rule-governed action. According to Black, we tend to assume that the educational choice is between "blind, unconscious mastery" (which could be the outcome of simple conditioning) and conscious adherance to explicit rules or principles. The first of these Black termed "rule-covered behavior" and the second he called "rule-invoking behavior". But to formulate the educational choice in these terms is misleading. There are other types of skilled and intelligent performances which lie between these extremes and which may represent a justifiable goal of education, e.g., the "rule-guided" behavior of the accomplished violinist. The good teacher, Black argued, may begin with conditioning but will at the appropriate time attempt to induce higher level performance. This higher level performance may go <u>beyond</u> conscious adherance to explicit principles or rules.

There have been many studies of the concept of learning. One which is both recent and thorough is that of Komisar (16) Komisar concluded that there are four distinct senses of 'learn': (a) 'learn that...', (b) 'learn the...', (c) 'learn to...', and (d) 'learn to be ...'. In 'learn that ...' and 'learn the ...', success of the learning implies <u>ability</u> to perform. In 'learn to ...' and 'learn to be ...' success implies <u>inclination</u> to perform. Komisar held 'learn to be ...' to be the highest form of learning because it "implies the learner's awareness and acceptance of his acts and responsibility for them".

Hamlyn (11) has attempted to delimit the roles to be performed by philosophy and psychology in studying learning. A more careful distinction should be made, he argued, between conceptual and empirical inquiry: the latter is the task of the psychologist and the former is the work of the philosopher.

Hamlyn is not talking about a jurisdictional dispute--it matters not who performs the tasks, but it is important that they be recognized as separate tasks, each requiring a particular mode of inquiry. In the absence of a clear distinction we sometimes find the empiricist looking for empirical evidence to test a necessary truth, or a "conceptualist" appealing to logic to validate an empirical claim. Hamlyn cites some of the work of Piaget as instances of looking to empirical evidence to test an analytic proposition.

The concept of transfer of learning has been examined by Kelley (15). Finding the phrase ambiguous and misleading in much educational literature, Kelley suggested that 'transfer' be replaced by concepts which are less unclear. He claimed that if the concern is with the question of how some prior learning affects some subsequent learning, a better approach would be to speak of different kinds of "prerequisite knowledge" for a particular subsequent learning. It would also be useful, he asserted, to distinguish between necessary and beneficial prerequisite knowledge.

There has also been some attention directed to the question of how teaching methods might best be determined. Hirst (14) examined the question of the extent to which the effective teaching of a subject is determined by the nature of the subject itself and to what extent it is determined by factors studied in the psychology of learning. The very question, according to Hirst, is puzzling. The question cannot belong to the subject itself, i.e., how to best teach chemistry is not a chemical question. But neither is the question of how to best teach chemistry simply an empirical one, for empirical research into methods of teaching chemistry is of little use until we have decided what will count as students having learned chemistry. And this latter question does not seem to be an empirical one. From his analysis Hirst concluded that:

(a) At least some subjects have a"logical grammar" which governs the meaningful use of terms in that subject. Hence all teaching of the

subject must conform to that grammar or we would deny that the activity was teaching the subject.

(b) The logical grammar may involve an order of terms, i.e., the meaning of some terms presupposes the meaning of others. The teaching of the subject must respect this order.

(c) In many cases the order of terms is not a strict order, and hence there is a vast area for empirical investigations concerning the effectiveness of different methods.

(d) Although the logical sequence must emerge in the teaching of the subject, that sequence need not be a temporal one.

(e) The logical grammar of a subject is a question to be answered by a careful analysis of the subject to be taught, not by empirical investigation.

The much talked about "discovery method" has been examined by Dearden (5). He analyzed three common meanings of 'learning by discovery'. The first of these he called the "pre-school model" in which the paradigm of learning is the young child in a free, non-school situation who is discovering many things for himself as he explores his environment. Dearden criticized this view on the grounds that many of the things which we want children to learn in schools will not be learned in this way, e.g., mathematics and science. Scientific investigation, he argued, is not natural but is rather a particular social tradition of inquiry which must be taught if it is to be learned. The second meaning of 'learning by discovery' Dearden termed "abstractionism". This view, in brief, is that some special sort of instructional materials are presented, without instruction, to the child. From these materials the child will supposedly "abstract" the concept to be learned. A basic problem here, according to Dearden, is that there may be many concepts which can be abstracted and

there is no reason to believe that the child will abstract the concept which concerns the teacher. To put this another way, if a teacher has a goal of getting a child to conceive of his environment in a particular way, say scientifically, then more is needed that simply putting the child into contact with the environment: he must also be taught <u>how</u> to conceive it. The third meaning examined is that of "problem solving". This, Dearden said, is a more defensible view of 'learning by discovery'. Here the teacher takes a more active role by:

> "framing problems, suggesting, or instructing what initially to do, but...leaves the result of the learner's activity open in some important respect, so that what is to be learned has indeed to be found out, and is not imparted."

Dearden asserted that it would be too time consuming to have all schooling based on this method, and that perhaps the intelligent teacher will in some circumstances engage in intelligent instruction or impart information and in other cases will encourage learners to engage in problem solving.

In addition to the work being done by analytic philosophers of education on the concepts of teaching and learning, there has also been a continuing dialogue on the related concept of indoctrination. Several important papers have appeared. Time does not allow their review here, but among them are papers by Hare (12), Atkinson (2), Flew (6) and Wilson (25,26). These have all been carefully reviewed by Nelson(19).

In conclusion, it seems that philosophers of education are attempting to bring conceptual rigor to bear on educational concepts. This is much needed to match and supplement the empirical rigor available to those who are generally given the title of educational researchers.

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